U. S. FOREST SERVICE

RESEARCH NOTE NC-14

NORTH CENTRAL FOREST EXPERIMENT STATION, FOREST SERVICE—U.S. DEPARTMENT OF AGRICULTURE

Folwell Avenue, St. Paul, Minnesota 55101

Hardwood Face Veneer and Plywood Mill Closures in Michigan and Wisconsin Since 1950

In recent years there has been a great deal of concern about the closure of numerous hardward face veneer and plywood mills in Michigan and Wisconsin. As part of an overall study of that industry in the northern Lake States region, the basic reasons leading to the closure of these mills were investigated. In the past 15 years, there have been eight known mill closures[1] within the study area with an estimated total employment loss of 1,600 people. Presumably, each of these closures affected the economic equilibrium of the geographic areas in which they were located.

One or two former officials associated with each of these firms were interviewed to learn the chief reasons behind these closures. A second interview served as a means of confirming opinions secured from the first interviewee. How available raw material resources affected the closures was a primary point discussed. Information pertaining to markets, products manufactured, affiliations with larger companies, and reasons for closure was solicited. In addition, historical data on each company was recorded, including information regarding disposal of plant equipment and resettling of employees after the mill closed.

The products made by these firms did not fall into any special category, although each mill was primarily a hardwood plywood producer. Some produced a mixed line of door and wall paneling, whereas others manufactured cabinet and lumber core plywood. In one case, the product-mix included the fabrication of plywood boxes for certain specialty items. The products of these eight mills were marketed in a number of geographical areas, and some were even sent abroad for foreign consumption.

[1] *The number of closures was equally divided among Michigan and Wisconsin. The total number of hardwood face veneer and plywood mills in the region has varied little in the past 15 years, with the total population remaining at approximately 30 to 32 mills. This relatively narrow range is largely due to either the creation of totally new operations or reactivation of closed mills under new management.*

All of the mills closed their operations within 10 years of one another; that is, between the years of 1953 and 1962. Four were owned by the same company and ended production within 4 years of one another. These four mills were part of a large-scale closure operation conducted by the parent company throughout the nation. Three of the other mills were independently owned by one or two individuals or by local stockholders. A fourth was absorbed by a large national firm and closed shortly thereafter. There appeared to be no correlation between the size of the firm (in terms of the number of employees) and closure inasmuch as some mills employed as few as 30 and others as many as 300 people.

PRIMARY PROBLEMS OF THE REGION'S MILLS

The interviews, plus study of data and literature on the industry, disclosed several problems that are of primary importance to mills in the region. These problems are discussed below, while specific reasons for each mill's closure are offered in the next section.

Raw Material Supplies

A preliminary evaluation of the veneer log supply shows a declining trend in quality of the raw material available to regional mills. As the quality becomes poorer, the mill manager is faced with numerous alternatives. He may find that veneers needed for various markets and operations can be obtained only by more intensively managing his manufacturing operations. Unit costs normally increase when such action is taken. On the other hand, the mill operator can utilize the material from the poorer logs and expect his final products to be altered accordingly, but they must still be marketable.

The quantity of veneer logs available is also an important consideration. As this raw material supply dwindles, mills either seek new sources of logs or enter into stiff competition with one another

for the available log supply. In either case, the result is higher unit costs.

Data on veneer log production and consumption in Michigan and Wisconsin show sharp declines in the 11-year period, 1952-1963 (tables 1 and 2). At least part of this declining veneer log production may have been due to mill closures within the Lake States region, but even after the bulk of the closures had taken place (up through 1958) a decline was still evident. To further complicate matters, the downward trend in the region has occurred in a time when domestic consumption of hardwood veneer and plywood products has greatly expanded.

TABLE 1. — *Annual veneer log production in Michigan and Wisconsin for selected years*
(Thousand board feet, Int. ¼" scale)

Year	Veneer log production		
	Wisconsin	Michigan	Total
1952	29,956	40,219	70,175
1954	27,109	34,499	61,608
1956	30,403	39,655	70,058
1958	23,740	19,958	43,698
1960	25,467	18,486	43,953
1963	25,203	15,300	40,503

Source: Compiled from North Central Forest Experiment Station data presented in numerous Research and Technical notes for the years indicated.

TABLE 2. — *Annual veneer log consumption in Michigan and Wisconsin for selected years*
(Thousand board feet, Int. ¼" scale)

Year	Veneer log consumption		
	Wisconsin	Michigan	Total
1952	60,629	28,338	88,967
1954	59,572	21,872	81,444
1956	53,234	10,838	64,072
1958	43,063	12,597	55,660
1960	51,298	12,075	63,373
1963	41,918	7,598	49,516

Source: Compiled from North Central Forest Experiment Station data presented in numerous Research and Technical Notes for the years indicated.

Competition from Imports and Substitute Materials

In 1951, a reduction in the tariff on imported hardwood plywood (table 3) apparently resulted in an increased flow of low-cost foreign hardwood plywood into the United States, mostly in the form of wall panels, door material, and kitchen cabinet stock. Tariff rates for birch and "other" hardwood plywood were either halved or nearly halved between 1945 and 1951. Significantly, imported hardwood plywood began accounting for an increasing percentage of domestic consumption in 1952. By way of comparison, imports represented about 8 percent of the total U. S. consumption of hardwood plywood in 1951 and about 54 percent in 1964.[2]

In addition to the imports, the markets of hardwood veneer and plywood have been threatened by many types of substitute products. Steel, plastics, aluminum, and composition materials have captured many traditional wood markets. Their effect has been felt at one time or another by nearly every hardwood veneer and/or plywood manufacturer in the region.

Corporate Management Decisions and Policies

When profit margins diminish, corporate management decisions and policies take on added meaning. Most of the factors associated with mill closures mentioned thus far may be termed as "external to the firm." Corporate management decisions and policies, on the other hand, represent something entirely different. As the quality and quantity of the raw material resource decline, the mill manager and his associates must decide what action should be taken. When the company's product line falters, changes must be made. Undoubtedly, some corporations are better managed than others, and the degree to which they are effectively managed is of utmost importance. Of all the factors mentioned in regard to closure, management decisions and policies are perhaps the most important and yet, least subject to quantification.

REASONS FOR EACH MILL CLOSURE

In our opinion, no single factor was responsible for the closure of regional mills. The competitive position of each firm appeared to be weakened by several external factors (imports, substitutes, raw materials). When these were combined with a series of inappropriate management decisions, the mill closed. One might question whether obsolete equipment may have been a factor in some of the closures. The investigation showed that the majority of the firms were either less than 10 years

[2] *McDonald, Clark E. Hardwood plywood: 1.5MM. Forest Industries, Miller-Freeman Publications, Portland, Oregon. January 1965, p. 46.*

TABLE 3. — *Hardwood plywood: United States rates of duty under the Tariff Act of 1930, in specified years 1930 to 1955*
(Percent ad valorem)

Species	Tariff rate		
	In 1930	On Jan. 1, 1945	In 1955
Birch	50	1/ 25	2/ 15
Alder	50	50	3/ 25
Spanish cedar	40	40	40
Other	50	40	2/ 20

Source: The Production, Importation, and Marketing of Hardwood Plywood in the United States. U.S. Tariff Commission, Washington, D. C., December 1955, p. 11

1/ Trade Agreement with Finland, effective November 1936. Agreement terminated May 24, 1950, after Finland acceded to the General Agreement on Tariffs and Trade, pursuant to Annecy negotiations.

2/ General Agreement on Tariffs and Trade (Torquay), effective June 1951.

3/ General Agreement on Tariffs and Trade (Annecy), effective April 1950.

old at the time of closure or had some equipment and buildings renovated during the 5 years preceding closure. In many cases the equipment in these closed mills was quickly sold to other veneer and plywood manufacturers within the region.

Shortage of Quality Veneer Logs

The general decline in the veneer log resource during recent years did not appear to be a major factor in any of the closures investigated. Four of the firms did not mention raw material supply as a factor in the decision to close down operations. The remaining firms, all part of a nationwide veneer and plywood complex, had access to considerable quantities of company-owned timber within their normal procurement areas. During liquidation, this timber was sold on the market, with the parent firm realizing a substantial profit.

Competition from Imports and Substitute Materials

All of the former executives interviewed believe that their firms were affected by competition from imports and substitute materials. An executive of the company that once operated four plywood mills within the region stated his belief that at least two of the mills would be in operation today if it were not for competition from imports. In addition the plywood box line that these firms manufactured lost markets to domestically produced paper products which performed as substitutes. Another firm experienced competition from "fir" plywood as a construction material in the mobile home industry.

Our entire regional veneer and plywood industry almost certainly has been affected by the influx of imported hardwood plywood. But some mills, with their enlightened and informed management, have met this challenge quite adequately. Others have seen their profit margins diminish, but still remain in business. We believe that the competition of imports with domestically produced hardwood veneer and plywood was but a *contributing* factor in the closure of some operations.

Management Oriented Decisions and Policies

In the previous section, mention was made of a situation in which a company official felt that imports were basically responsible for the closure of two mills. Closer examination of the circumstances surrounding these closures, however, proved interesting. The parent company had operated "in the black" for some 25 years, but personnel changes in the top management and the firm's auditors had produced an apparent loss of

$10 million during one year.[3] As it turned out, closure of the four regional mills was but a part of a liquidation policy set up by the new management of the parent company. Whether all four mills were operating at a loss at the time of closure is not known, but at least one was having some difficulty maintaining acceptable quality standards.

In at least two of the other four mills, management decisions and policies appeared to play a major role in their closures. Heavy investment in capital equipment left one company short of funds to meet weekly payrolls and other short-term contractual agreements. In time, the company's financial status and credit rating deteriorated. The other mill faced a somewhat different problem. Apparently, the owner did not realize the extent to which imports were competing with his firm's products. Loss of markets and failure to alter the product-mix soon resulted in mill closure.

Over the past 5 years, mill managers have become increasingly aware of the advantages of sound management practices. They have come to accept the fact that wood raw material supplies and the flow of low-cost imports are, for the most part, factors which they do not control. These mill operators are now examining their production methods and management policies. Hopefully, small changes in these areas can substantially improve the overall profit picture.

[3] *See Fortune magazine, Volume LVII (1): 118. January 1958.*

LEWIS T. HENDRICKS
Associate Forest Products Technologist

September 1966